

## **API 653 Exam (July 2022)**

### **• API 650**

1. Backing Definition.
2. Isothermal Lines: Los Angeles.
3. Annular plate projected length and min.thickness.
4. Drip Ring Extended Length.
5. Table 5.2b allowable design stress & hydrostatic stress of reconstructed Tank.
6. Water filling rates.
7. Visual Examination of free vent roof.
8. Peaking and banding Tolerance.
9. Reinforcement.
10. Vacuum test Range.
11. Table S.4 stainless (E) Value.

### **• API 653**

1. API 653 VS Jurisdiction (more stringent govern) Drag and drop question with two answers.
2. API RP 2009 References.
3. Critical zone Definition.
4. Major Alteration/Major Repair Definition.
5. Minimum Patch thickness in bottom critical zone.
6. Minimum dimension away from the zero weld and adjacent Patch.
7. Tank Roof 6 UT readings in 100 in<sup>2</sup> area (need repair or not).
8. Max. Corrosion Rate and max. Inspection intervals calculation.
9. Distortion and Settlement questions.
10. MRT calculation.
11. Min allowed corroded extended bottom plate beyond the shell (thickness and length).
12. Calcining of foundation Concrete.
13. Maximum Routine Visual Inspection Interval.
14. Interval of External Visual inspection (5yrs. or RCA/4N).
15. Interval of External UT survey Inspection (Unknown N (5 yrs.) and Known N(15 yrs. Or RCA/2N).
16. Owner operator review CP team qualifications.
17. Maximum interval with RBI (20 yrs. Without & 30 yrs. With).
18. RBI team Responsibility.
19. Flange material (AS built standard) Vs fasteners (current applicable standard).
20. Air Pressure 15 PSIG.
21. Rigid body = Planar tilt.
22. Annex G t<0.05 ( 90% to 100%).
23. Annex G qualification testing 70 ft<sup>2</sup> and 40 hrs. Training.

24. Annex G Qualification test definition.
25. Corrosion allowance, Bottom/shell in the remaining thickness.
26. Table H.1 Kerosene Class.

- **ASME Sec IX**

1. WPS and PQR (thickness covered or not by the PQR).
2. PQR (Impact test Value accepted or not).
3. WPS and WPQ (Can the welder qualified use the WPS by thickness also).

- **ASME Sec V**

1. Magnetizing meter deviation.
2. IQI determination (Film side or source side).
3. Backscatter rejection.

- **API 652**

1. Thick lining high voltage Vs Thin Lining low voltage brush.
2. Thin <20 micron Vs Thick > 20 micron.
3. High voltage for old lining not recommended Why?

- **API 651**

1. Doubling the C.R every 18F above 77F.
2. CP Intervals for sources (2 months) and effectiveness of CP system (annual).

- **API 571**

1. CL-SSC (Nickel 45% Immune).
2. NaOH and KOH which Damage mechanism.
3. Internal piping of heating coils which damage mechanism.

- **API 575**

1. Types of atmospheric tanks (Drag & drop).
2. Atmospheric tanks Vs Low pressure tanks Uses (Matching).
3. 0.2% to 10% of the bottom area as statistical method.

- **API 577**

1. GMAW-S Limitations.
2. Burn through.

**Note: API 653 Previous Exams (July 2021 and March 2022) with the Body of knowledge is the best final revision at the exam night**